DESIGN

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MACHINE TOOL COMPANY

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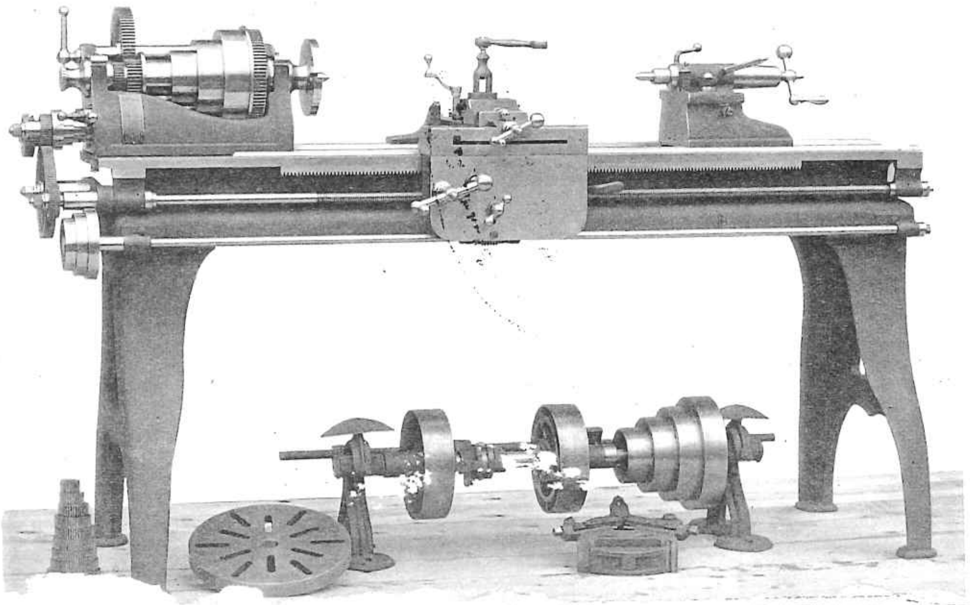
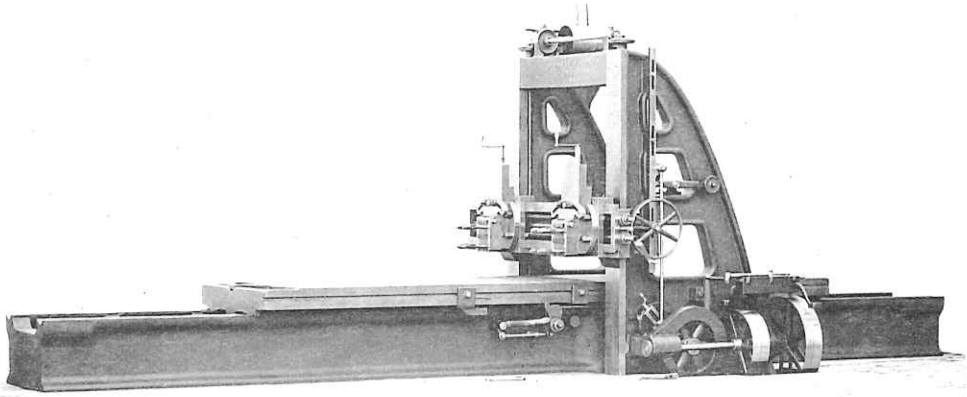




type Printing and Publishing Co., Gardner, Mass.

SIXTY INCH PLANER,

MANUFACTURED BY

POND MACHINE TOOL COMPANY,

MANUFACTURERS OF

IRON WORKING MACHINERY,

WORCESTER, MASS.

New Pattern including new features patented. Bed has great depth and its length in proportion to the length of table is greatly in excess of usual practice.

Uprights have sufficient metal and breadth of base to resist heavy cuts without jar when tool is at greatest height.

Table very thick, with three bolt slots truly planed, and pin holes drilled and reamed; receives back and forward motion from an open and a crossed belt through a powerful train of cut gears and rack. These gears are mounted on shafts having very large diameters and more than twice the usual length of journal. These journals carefully scraped together and straight surfaces scraped to surface plates. The patented automatic belt shifter transfers but one belt at same time, thus obviating squealing of belts and jar of machine; it is entirely disconnected from feeding apparatus and is arranged to throw out to clear the reversing dogs on the table which can then be run backward to examine the work.

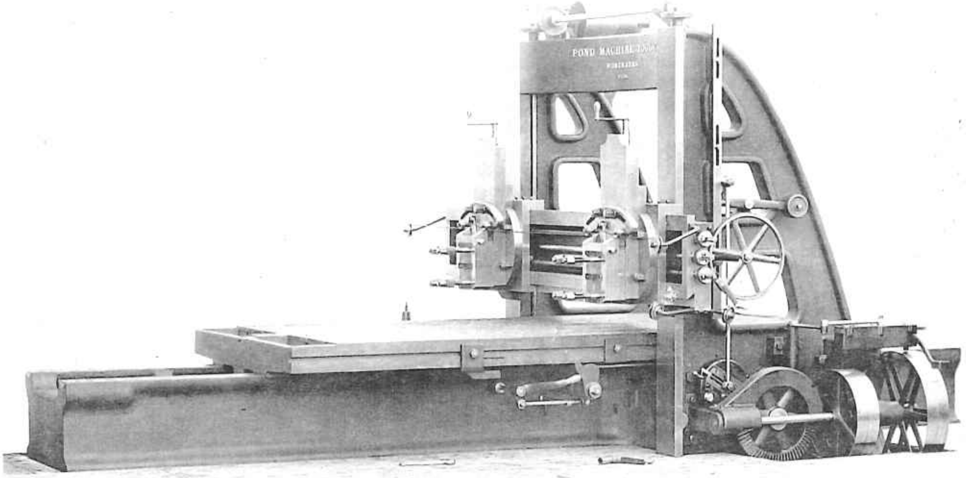
The patented feeding device gives automatic feed in all directions and is adjustable from 0 to 1 inch wide, and takes no power except at moment of feeding. The down and angular feeds can be operated by hand, if more convenient, from both ends of cross-head as well as top of saddle.

Counter-shaft is furnished, and has two pulleys each 24 inches diameter, by 5-inch face for 5-inch belt, and should make 200 revolutions a minute.

PLANER WITH SMALL PARTS BOXED, DELIVERED AT DEPOT IN WORCESTER.

Plane in Width.	Plane in Height.	Plane in Length.	Weight.	Weight per Foot.	Price.	Price per Foot.
60 Inches.	60 Inches.	12 Feet.	45000 lbs.	2000 lbs.	$	$

Extra Saddle on Cross-Head, $ extra. Saddle on Uprights, $, each.



Lithotype Printing and Publishing Co., Gardner, Mass.

SEVENTY-TWO INCH PLANER,

MANUFACTURED BY

POND MACHINE TOOL COMPANY,

MANUFACTURERS OF

IRON WORKING MACHINERY,

WORCESTER, MASS.

New Pattern including new features patented. Bed has great depth and its length in proportion to the length of table is greatly in excess of usual practice.

Uprights have sufficient metal and breadth of base to resist heavy cuts without jar when tool is at greatest height.

Table very thick, with three bolt slots truly planed, and pin holes drilled and reamed; receives back and forward motion from an open and a crossed belt through a powerful train of cut gears and rack. These gears are mounted on shafts having very large diameters and more than twice the usual length of journal. These journals carefully scraped together and straight surfaces scraped to surface plates. The patented automatic belt shifter transfers but one belt at same time, thus obviating squealing of belts and jar of machine; it is entirely disconnected from feeding apparatus and is arranged to throw out to clear the reversing dogs on the table which can then be run backward to examine the work.

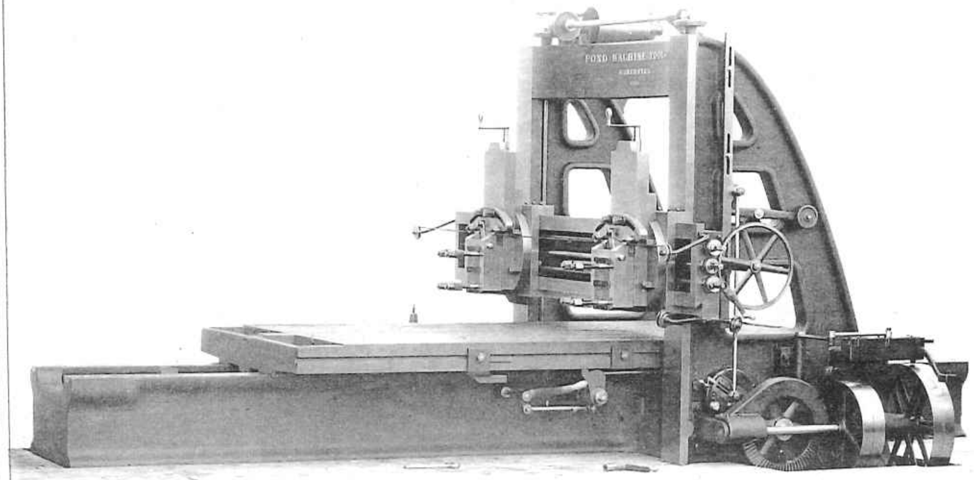
The patented feeding device gives automatic feed in all directions and is adjustable from 0 to 1 inch wide, and takes no power except at moment of feeding. The down and angular feeds can be operated by hand, if more convenient, from both ends of cross-head as well as top of saddle.

Counter-shaft is furnished, and has two pulleys each 24 inches diameter, by 5-inch face for 5-inch belt, and should make 200 revolutions a minute.

PLANER WITH SMALL PARTS BOXED, DELIVERED AT DEPOT IN WORCESTER.

Plane in Width.	Plane in Height.	Plane in Length.	Weight.	Weight per Foot.	Price.	Price per Foot.
72 Inches.	72 Inches.	12 Feet.	52000 lbs.	2000 lbs.	$	$

Extra Saddle on Cross-Head, $ extra. Saddle on Uprights, $, each.



Lithotype Printing Co., Ga [illegible] York Office, 114 Nassau

EIGHTY-FOUR INCH PLANER.

MANUFACTURED BY

POND MACHINE TOOL COMPANY,

Successors to DAVID W POND, Manufacturers of

IRON WORKING MACHINERY,

DAVID W. POND, Pres't. **WORCESTER, MASS.** A. C. STEBBINS, Treas.

New Pattern including new features patented. Bed has great depth and its length in proportion to the length of table is greatly in excess of usual practice.

Uprights have sufficient metal and breadth of base to resist heavy cuts without jar when tool is at greatest height.

Table very thick, with three bolt slots truly planed, and pin holes drilled and reamed; receives back and forward motion from an open and a crossed belt through a powerful train of cut gears and rack. These gears are mounted on shafts having very large diameters and more than twice the usual length of journal. These journals carefully scraped together and straight surfaces scraped to surface plates. The patented automatic belt shifter transfers but one belt at same time, thus obviating squealing of belts and jar of machine; it is entirely disconnected from feeding apparatus and is arranged to throw out to clear the reversing dogs on the table which can then be run backward to examine the work.

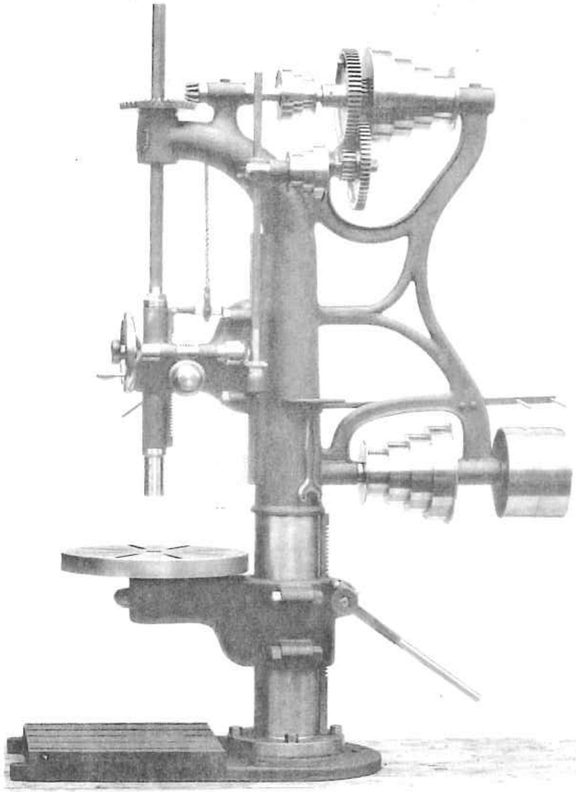
The patented feeding device gives automatic feed in all directions and is adjustable from 0 to 1 inch wide, and takes no power except at moment of feeding. The down and angular feeds can be operated by hand, if more convenient, from both ends of cross-head as well as top of saddle.

Counter-shaft is furnished, and has two pulleys each 24 inches diameter, by 5-inch face for 5-inch belt, and should make 200 revolutions a minute.

PLANER WITH SMALL PARTS BOXED, DELIVERED AT DEPOT IN WORCESTER.

Plane in Width.	Plane in Height.	Plane in Length.	Weight.	Weight per Foot.	Price.	Price per Foot.
84 Inches.	84 Inches.	12 Feet.	56000 lbs.	2670 lbs.	$	$

Extra Saddle on Cross-Head, $, extra. Saddle on Uprights, $, each.



Lithotype Printing and Publishing Co., Gardner, Mass.

TWENTY-TWO INCH DRILL,

DRILLS TO CENTRE OF 22-INCH CIRCLE.

MANUFACTURED BY

POND MACHINE TOOL COMPANY,

MANUFACTURERS OF

IRON WORKING MACHINERY,

WORCESTER, MASS.

This drill is made from new designs, placing the metal to give greatest resistance to breaking strains. All working parts have large wearing surfaces accurately scraped, straight surfaces being scraped to surface plates.

The drill has a patented device, whereby the entire adjustable head, including the spindle, is balanced by one and the same weight that balances the spindle alone, thereby dispensing with rack, pinion, ratchet, pawl and wrench, otherwise necessary to move the adjustable drilling head, up or down the face of the column.

This device also admits of keeping the spindle evenly balanced whether the smallest Drill or heaviest Boring Bar, or other tool is used, hence the quick return motion by hand, works as easily with a very heavy tool as with a light one, and is also very convenient as a hand feed for drilling small holes, and for quick adjustment of cutting tools.

The drill spindle is made from hammered cast steel, large in diameter, and has hand and three changes of power feed, the latter being connected to it by a simple and positive friction.

The circular table can be revolved around its own axis, and swings around the column, thus allowing the placing of any point on the surface of table under centre of spindle; also, can be raised or lowered to any position in its traverse on the column.

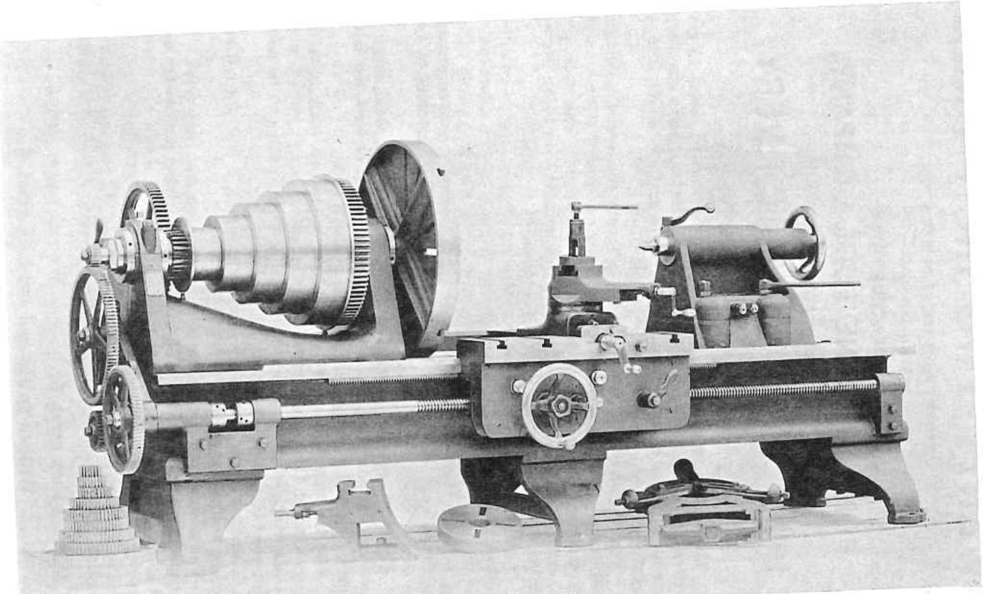
The base table is accurately planed, having T slots for convenience in bolting work.

The cones and gears are unusually large and powerful. No overhead counter required. Tight and loose driving pulleys are each 12 inches diameter by 4 inches face, and should make 240 revolutions per minute.

Weight 2200 lbs. Price, delivered on board cars in Worcester, complete, $

Without back gears, $ Without power feed, $

Without power feed and back gears, $



Lithotype Printing Co., Gardner, Mass. New York Office, 114 Nassau St.

THIRTY INCH LATHE,

MANUFACTURED BY

POND MACHINE TOOL COMPANY,

Successors to DAVID W. POND, Manufacturers of

IRON WORKING MACHINERY,

DAVID W. POND, Pres't. **WORCESTER, MASS.** A. C. STEBBINS, Treas.

This Lathe has large working parts accurately fitted by hand scraping, without filing or grinding by use of emery, straight surfaces being scraped to surface plates. Lathe is easily handled for light and quick running work and is sufficiently rigid for heaviest work. Has patent adjustable head spindle journal boxes made of hard bronze metal; spindles, all feed screws, racks and small gears are made of steel.

Lathe has back gear, screw-cutting apparatus, power cross feed, compound rest, centre rest, and two face plates.

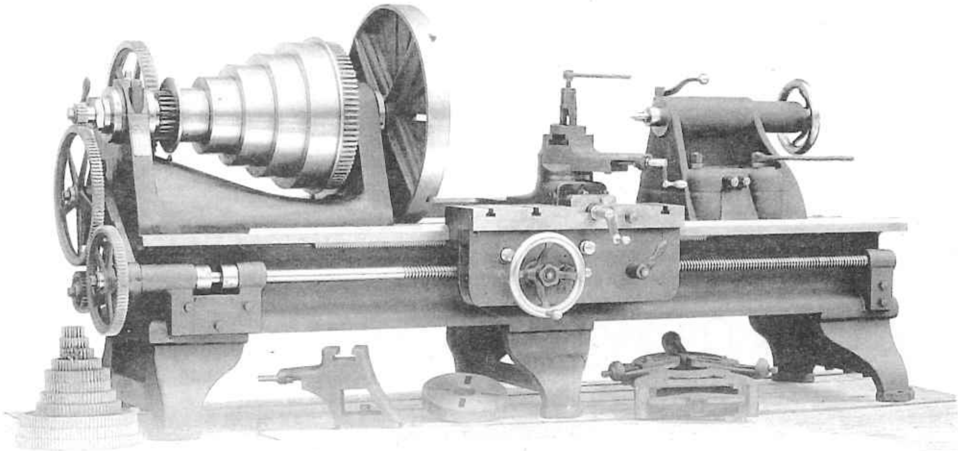
The feed gearing is driven from a slot in the screw, arranged *not to use the thread, consequently its accuracy is not impaired for screw cutting*, and is applied by a *simple and positive friction*; the use of a double apron allows all feed gears to be mounted on shafts having bearings at each end. The RACK PINION is so arranged that *it can be drawn entirely out of the rack*, absolutely preventing the friction feed from becoming engaged while cutting screws.

The rest is gibbed to the *outside of the bed both front and back*, and has solid bearings on the Vs of bed entire length of the rest, and is furnished with an extra adjustable tool block for work large as will swing in Lathe.

Three *Pulleys on Counter-shafts* are each 20 inches diameter by 10 inches face, for 5-inch belt, and should make 80 revolutions per minute.

Swing over Bed,	Swing over Rest,	Length of Bed,	Turn in Length,	Weight,	Price,	Price per Foot.	Weight per foot.
30 inches.	22 inches.	8 feet.	2 ft. 3 in.	5,800 lbs.	$	$	275 lbs.

Triple geared into face plate, $, extra. Beds can be made of any desired length.



Lithotype Printing Co., Gardner, Mass. New York Office, 114 Nassau St.

THIRTY-TWO INCH LATHE,

MANUFACTURED BY

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Successors to DAVID W POND, Manufacturers of

IRON WORKING MACHINERY,

DAVID W. POND, Pres't. **WORCESTER, MASS.** A. C. STEBBINS, Treas.

This Lathe has large working parts accurately fitted by hand scraping, without filing or grinding by use of emery, straight surfaces being scraped to surface plates. Lathe is easily handled for light and quick running work and is sufficiently rigid for heaviest work. Has patent adjustable head spindle journal boxes made of hard bronze metal; spindles, all feed screws, racks, and small gears are made of steel.

Lathe has back gear, screw cutting apparatus, power cross feed, compound rest, centre rest, and two face plates.

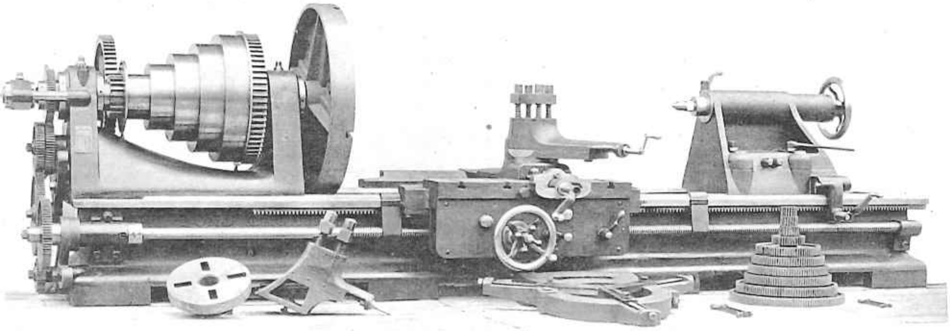
The feed gearing is driven from a slot in the screw arranged *not to use the thread, consequently its accuracy is not impaired for screw cutting*, and is applied by a *simple and positive friction*; the use of a double apron allows all feed gears to be mounted on shafts having bearings at each end. The RACK PINION is so arranged that *it can be drawn entirely out of the rack*, absolutely preventing the friction feed from becoming engaged while cutting screws.

The rest is gibbed to the *outside of the bed both front and back* and has solid bearings on V's of bed entire length of the rest, and is furnished with an extra adjustable tool block for work large as will swing in Lathe.

Three *Pulleys on Counter Shafts* are each 20 inches diameter by 10 inches face, for 5-inch belt, and should make 75 revolutions per minute.

Swing over Bed.	Swing over Rest.	Length of Bed.	Turn in Length.	Weight.	Price.	Price per foot, extra.	Weight per foot.
32 inches.	24½ inches.	8 feet.	2 ft. 3 in.	6200 lbs.	$	$	285 lbs.

Triple geared into face plate, $, extra Beds can be made of any desired length.



Lithotype Printing Co., Gardner, Mass. New York Office, 114 Nassau St.

THIRTY-SIX INCH LATHE,

MANUFACTURED BY

POND MACHINE TOOL COMPANY,

Successors to DAVID W. POND, Manufacturers of

IRON WORKING MACHINERY,

DAVID W. POND, Pres't. **WORCESTER, MASS.** A. C. STEBBINS, Treas.

This Lathe has large working parts accurately fitted by hand scraping, straight surfaces being scraped to surface plates. Has patent adjustable head spindle journal boxes made of hard bronze metal. Spindles, all feed screws, racks and small gears are made of steel. Lathe has back gear, screw cutting apparatus, power cross feed, compound rest, centre rest, and two face plates.

The feeds are driven from a slot in the screw, arranged *not to use the thread, consequently its accuracy is not impaired for screw cutting,* and is applied by a *simple and positive friction;* the use of a double apron allows all feed gears to be mounted on shafts having bearings at each end. The *rack pinion* is so arranged that *it can be drawn entirely out of the rack,* absolutely preventing the friction feed from becoming engaged while cutting screws.

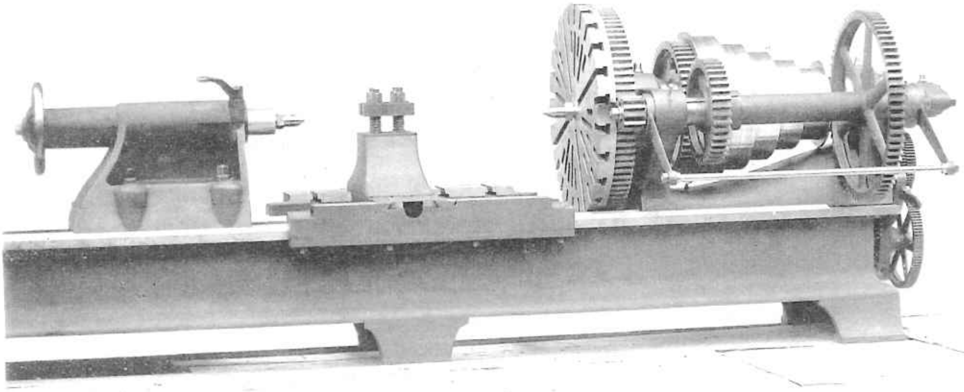
A gear mounted in the sliding head engaging with the rack enables the workman to move the head as easily as the rest.

The rest is gibbed to the *outside of the bed both front and back,* and has solid bearings on V's of the bed entire length of the rest, and is furnished with an extra adjustable tool block for work large as will swing in the Lathe. Tool is held by two straps and four bolts.

Three *pulleys on counter-shafts* are each 30 inches diameter by 10 inches face for 5-inch belt, and should make 58 revolutions per minute.

Swing over Bed.	Swing over Rest.	Length of Bed.	Turn in Length.	Weight.	Price.	Price per foot.	Weight per foot.
36 inches.	25½ inches.	12 feet.	4 ft. 5 in.	11,000 lbs.	$	$	385 lbs.

Triple geared into face plate, $, extra. Beds can be made of any desired length.



Lithotype Printing Co., Gardner, Mass. New York Office, 114 Nassau St.

THIRTY-SIX INCH, TRIPLE GEARED, LATHE.

BACK VIEW.

MANUFACTURED BY

POND MACHINE TOOL COMPANY,

Successors to DAVID W. POND, Manufacturers of

IRON WORKING MACHINERY,

DAVID W. POND, Pres't. **WORCESTER, MASS.** A. C. STEBBINS, Treas.

This Lathe has large working parts accurately fitted by hand scraping, straight surfaces being scraped to surface plates. Has patent adjustable head spindle journal boxes made of hard bronze metal. Spindles, all feed screws, racks and small gears are made of steel. Lathe has triple gear, screw cutting apparatus, power cross feed, compound rest and centre rest.

The feeds are driven from a slot in the screw, arranged *not to use the thread, consequently its accuracy is not impaired for screw cutting*, and is applied by a *simple and positive friction;* the use of a double apron allows all feed gears to be mounted on shafts having bearings at each end. The *rack pinion* is so arranged that *it can be drawn entirely out of the rack*, absolutely preventing the friction feed from becoming engaged while cutting screws.

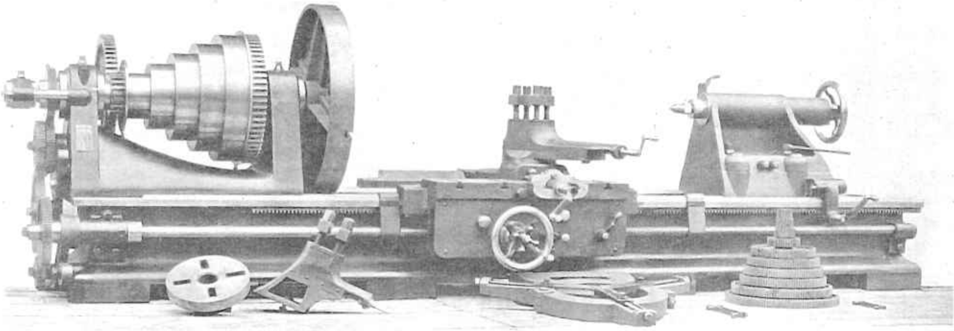
A gear mounted in the sliding head engaging with the rack enables the workman to move the head as easily as the rest.

The rest is gibbed to the *outside of the bed both front and back*, and has solid bearings on V's of the bed entire length of the rest, and is furnished with an extra adjustable tool block for work large as will swing in the Lathe. Tool is held by two straps and four bolts.

Three *pulleys on counter-shaft* are each 30 inches diameter by 10 inches face for 5-inch belt, and should make 102 revolutions per minute.

Swing over Bed.	Swing over Rest.	Length of Bed.	Turn in Length.	Weight.	Price.	Price per foot, extra.	Weight per foot.
36 inches.	23½ inches.	12 feet.	4 ft. 5 in.	11000 lbs.	$	$	385 lbs.

Beds can be made of any desired length.



Lithotype Printing and Publishing Co., Gardner, Mass.

FORTY-INCH LATHE,

MANUFACTURED BY

POND MACHINE TOOL COMPANY,

MANUFACTURERS OF

IRON WORKING MACHINERY,

WORCESTER, MASS.

This Lathe has large working parts accurately fitted by hand scraping, straight surfaces being scraped to surface plates. Has patent adjustable head spindle journal boxes made of hard bronze metal. Spindles, all feed screws, racks and small gears are made of steel. Lathe has back gear, screw cutting apparatus, power cross feed, compound rest, centre rest and two face plates.

The feeds are driven from a slot in the screw, arranged *not to use the thread, consequently its accuracy is not impaired for screw cutting*, and is applied by a *simple and positive friction*; the use of a double apron allows all feed gears to be mounted on shafts having bearings at each end. The RACK PINION is so arranged that *it can be drawn entirely out of the rack*, absolutely preventing the friction feed from becoming engaged while cutting screws.

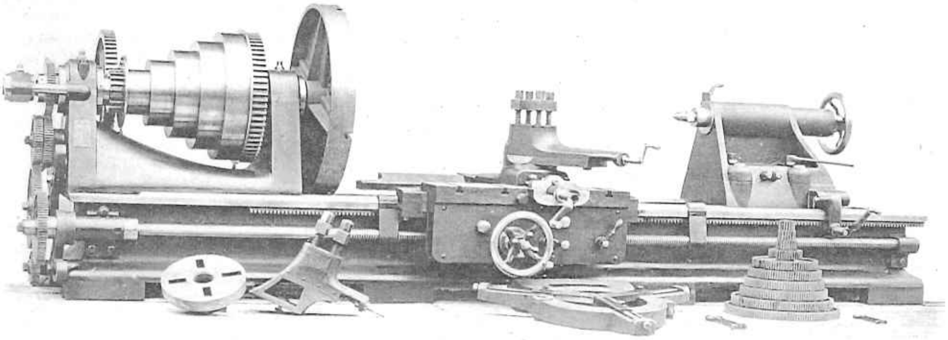
A gear mounted on the sliding head engaging with the rack enables the workman to move the head as easily as the rest.

The rest is gibbed to the *outside of the bed both front and back* and has solid bearings on V's of the bed entire length of the rest, and is furnished with an extra adjustable tool block for work large as will swing in the Lathe. Tool is held by two straps and four bolts.

Three *Pulleys on Counter-shaft* are each 30 inches diameter by 10 inches face, for 5-inch belt, and should make 50 revolutions per minute.

Swing over Bed.	Swing over Rest.	Length of Bed	Turn in Length.	Weight.	Price.	Price per foot,	Weight per foot.
40 inches.	28½ inches.	12 feet.	4 ft. 2 in.	13000 lbs.	$	$	430 lbs.

Triple geared into face plate, $, extra. Beds can be made of any desired length.



Lithotype Printing Co., Gardner, Mass. New York Office, 114 Nassau St.

FORTY-TWO INCH LATHE,

MANUFACTURED BY

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IRON WORKING MACHINERY,

DAVID W. POND, Pres't. **WORCESTER, MASS.** A. C. STEBBINS, Treas.

This Lathe has large working parts accurately fitted by hand scraping, straight surfaces being scraped to surface plates. Has patent adjustable head spindle journal boxes made of hard bronze metal. Spindles, all feed screws, racks and small gears are made of steel. Lathe has back gear, screw cutting apparatus, power cross feed, compound rest, centre rest, and two face plates.

The feeds are driven from a slot in the screw, arranged *not to use the thread, consequently its accuracy is not impaired for screw cutting*, and is applied by a *simple and positive friction;* the use of a double apron allows all feed gears to be mounted on shafts having bearings at each end. The *rack pinion* is so arranged that *it can be drawn entirely out of the rack*, absolutely preventing the friction feed from becoming engaged while cutting screws.

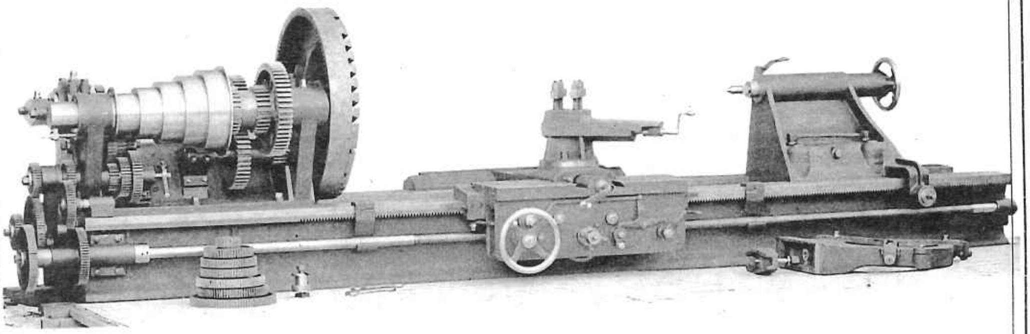
A gear mounted in the sliding head engaging with the rack enables the workman to move the head as easily as the rest.

The rest is gibbed to the *outside of the bed both front and back*, and has solid bearings on V's of the bed entire length of the rest, and is furnished with an extra adjustable tool block for work large as will swing in the Lathe. Tool is held by two straps and four bolts.

Three *pulleys on counter-shafts* are each 30 inches diameter by 10 inches face for 5-inch belt, and should make 50 revolutions per minute.

Swing over Bed.	Swing over Rest.	Length of Bed.	Turn in Length.	Weight.	Price.	Price per foot, extra.	Weight per foot.
42 inches.	30½ inches.	12 feet.	4 ft. 2 in.	13,500 lbs.	$	$	455 lbs.

Triple geared into face plate, $, extra. Beds can be made of any desired length.



Lithotype Printing Co., Gardner, Mass. New York Office, 114 Nassau St.

FORTY-EIGHT INCH LATHE,

MANUFACTURED BY

POND MACHINE TOOL COMPANY,

Successors to DAVID W. POND, Manufacturers of

IRON WORKING MACHINERY,

DAVID W. POND, Pres't. **WORCESTER, MASS.** A. C. STEBBINS, Treas.

This Lathe has large working parts accurately fitted by hand scraping, straight surfaces being scraped to surface plates. Head spindle journal boxes made of hard bronze metal. All racks and small gears are made of steel. Driving cone and gears are arranged to give fifteen regular gradations of speed. Range of threads that can be cut is 16 threads in one inch to 1 thread in four inches.

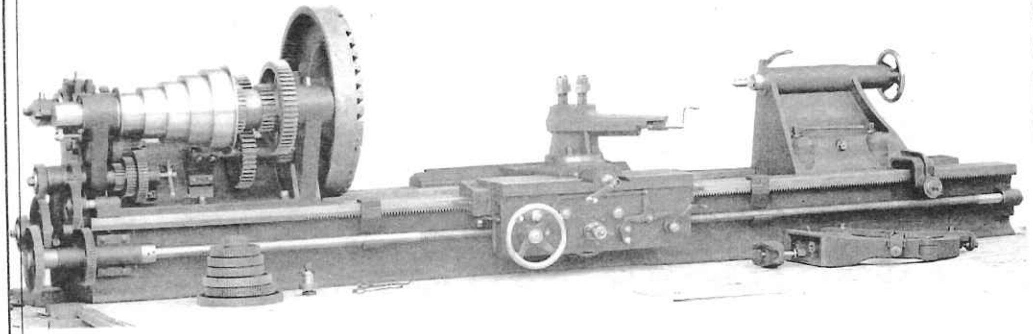
Feeds, backward and forward on the bed and rest, are driven from a slot in the screw, arranged *not to use the thread, consequently its accuracy is not impaired for screw cutting*, and are applied by a *simple and positive friction*; the use of a double apron allows all feed gears to be mounted on shafts having bearings at each end. The rack pinion is so arranged that *it can be drawn entirely out of the rack*, absolutely preventing the friction feed from becoming engaged while cutting screws. A gear mounted on the sliding head engaging with the rack enables the workman to move the head as easily as the rest.

The rest is gibbed to the *outside of the bed both front and back*, and has solid bearings on the bed the entire length of the rest. Tool is held by two straps and four bolts.

Three *Pulleys on Counter-shafts* are each 20 inches diameter by 12 inches face, for 6-inch belt, and should make 124 revolutions per minute.

Swing over Bed,	Swing over Rest,	Length of Bed,	Turn in Length,	Weight,	Price,	Price per Foot.	Weight per foot.
48 inches.	40 inches.	18 feet.	8 ft. 4 in.	24,000 lbs.	$	$	400 lbs.

Beds can be made any desired Length.



Lithotype Printing Co., Gardner, Mass. New York Office, 114 Nassau St.

FIFTY-FOUR INCH LATHE,

MANUFACTURED BY

POND MACHINE TOOL COMPANY,

Successors to DAVID W. POND, Manufacturers of

IRON WORKING MACHINERY,

DAVID W. POND, Pres't. **WORCESTER, MASS.** A. C. STEBBINS, Treas.

This Lathe has large working parts accurately fitted by hand scraping, straight surfaces being scraped to surface plates. Head spindle journal boxes made of hard bronze metal. All racks and small gears are made of steel. Driving cone and gears are arranged to give fifteen regular gradations of speed. Range of threads that can be cut is 16 threads in one inch to 1 thread in four inches.

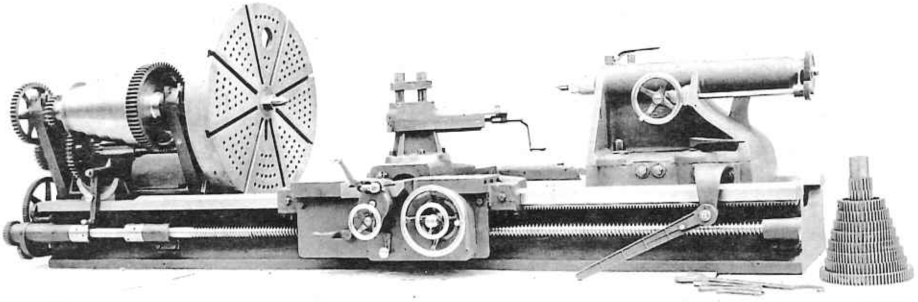
Feeds, backward and forward on the bed and rest, are driven from a slot in the screw, arranged *not to use the thread, consequently its accuracy is not impaired for screw cutting,* and are applied by a *simple and positive friction*; the use of a double apron allows all feed gears to be mounted on shafts having bearings at each end. The rack pinion is so arranged that *it can be drawn entirely out of the rack,* absolutely preventing the friction feed from becoming engaged while cutting screws. A gear mounted on the sliding head engaging with the rack enables the workman to move the head as easily as the rest.

The rest is gibbed to the *outside of the bed both front and back,* and has solid bearings on the bed the entire length of the rest. Tool is held by two straps and four bolts.

Three *Pulleys on Counter-shafts* are each 20 inches diameter by 12 inches face, for 6-inch belt, and should make 110 revolutions per minute.

Swing over Bed,	Swing over Rest,	Length of Bed,	Turn in Length,	Weight,	Price,	Price per Foot.	Weight per foot.
54 inches.	46 inches.	18 feet.	8 ft. 4 in.	24,800 lbs.	$	$	400 lbs.

Beds can be made any desired Length.



Lithotype Printing and Publishing Co., Gardner, Mass.

SIXTY-INCH LATHE,

MANUFACTURED BY

POND MACHINE TOOL COMPANY,

MANUFACTURERS OF

IRON WORKING MACHINERY,

WORCESTER, MASS.

This Lathe has large working parts accurately fitted by hand scraping, straight surfaces being scraped to surface plates. Head spindle journal boxes made of hard bronze metal. All racks and small gears are made of steel. Driving cone and gears are arranged to give fifteen regular gradations of speed. Range of threads that can be cut is from 16 threads in one inch to 1 thread in six inches.

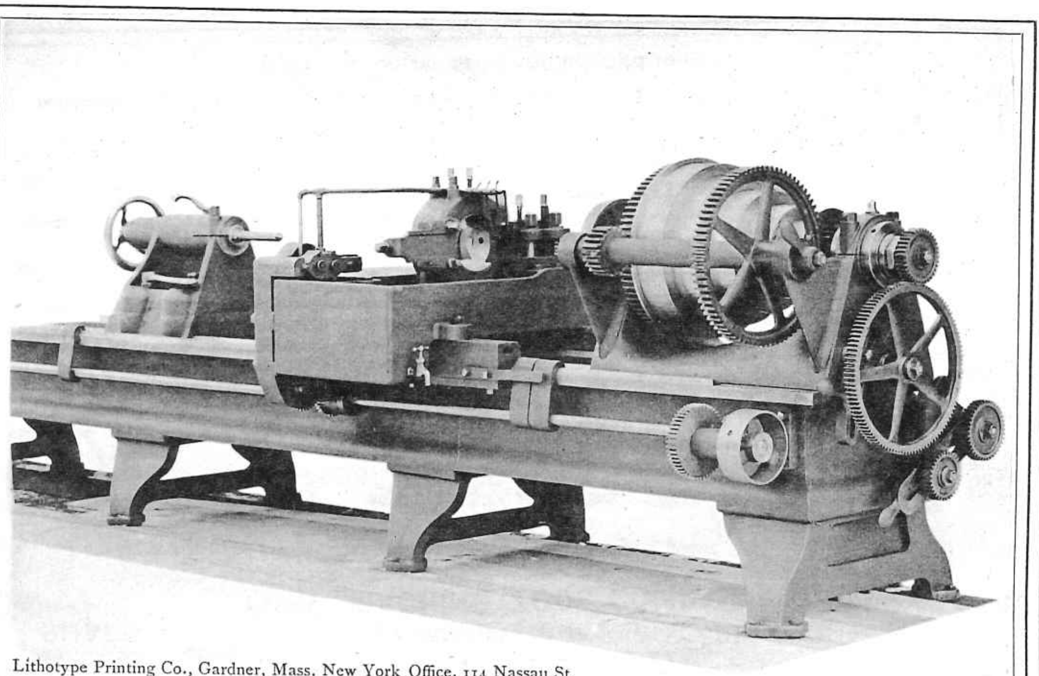
Feeds, backward and forward on the bed and rest and at all angles on the compound rest, are driven from a slot in the screw, arranged *not to use the thread, consequently its accuracy is not impaired for screw cutting*, and are applied by a *simple and positive friction*; the use of a double apron allows all feed gears to be mounted on shafts having bearings at each end. The RACK PINION is so arranged that *it can be drawn entirely out of the rack*, absolutely preventing the friction feed from becoming engaged while cutting screws. A gear mounted on the sliding head engaging with the rack enables the workman to move the head as easily as the rest.

The rest is gibbed to the *outside of the bed both front and back*, and has solid bearings on V's of bed entire length of the rest. Tool is held by two straps and four bolts.

Three *Pulleys on Counter-shafts* are each 30 inches diameter by 13 inches face, for 6-inch belt, and should make 115 revolutions per minute.

Swing over Bed.	Swing over Rest.	Length of Bed.	Turn in Length.	Weight.	Price.	Price per foot,	Weight per foot.
60 inches.	44 inches.	18 ft. 5 in.	8 feet.	30000 lbs.	$	$	700 lbs.

Beds can be made of any desired length.



Lithotype Printing Co., Gardner, Mass. New York Office, 114 Nassau St.

PATENTED

SHAFT TURNING ATTACHMENT, WITH ROTARY FORCE PUMP,

AS APPLIED TO

THIRTY INCH LATHE.

MANUFACTURED BY

POND MACHINE TOOL COMPANY,

Successors to DAVID W. POND, Manufacturers of

IRON WORKING MACHINERY,

DAVID W. POND, Pres't. **WORCESTER, MASS.** A. C. STEBBINS, Treas.

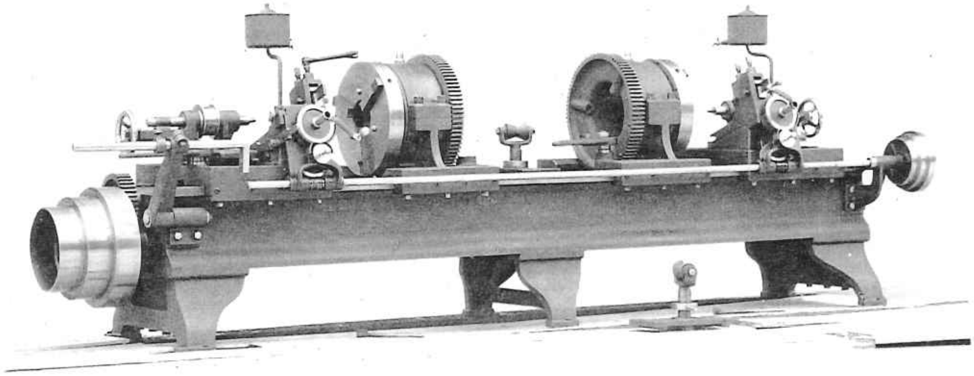
To be used in connection with our lathes, consists of a reservoir bolted to sliding rest, having strong housings to be bored to receive split rings for size and steadying, or fluted mills that will mill to size. Three cutting tools precede and one water polishing tool follows above rings and are all on front side of shaft to be turned; on back of shaft opposite the cutting tools is an adjustable support.

Pump attached to reservoir driven from lathe counter forces water on to each cutting tool. Pressure of each stream can be regulated as desired. Reservoir is so constructed that it catches falling water which is pumped again without waste. Reservoir may be readily removed, leaving regular lathe for general work.

Price, $250.

For turning long lengths of shafting, can apply power to driver plate on tail spindle so that shaft may be driven from same while being finished at head end, thus avoiding changing shaft end for end or removing from centres of lathe.

Price, $150.



Lithotype Printing Co., Gardner, Mass. New York Office, 114, Nassau St.

DOUBLE CUTTING-OFF AND CENTERING MACHINE.

MANUFACTURED BY

POND MACHINE TOOL COMPANY,

Successors to DAVID W. POND, Manufacturers of

IRON WORKING MACHINERY,

DAVID W. POND, Pres't. **WORCESTER, MASS.** A. C. STEBBINS, Treas.

The axles or shafts to be cut off square and centered, are held in self-centering chucks, which will admit shafts up to 8 inches diameter and are adjustable by rack and pinion on bed to required distance apart for length to be cut and are driven by cone and double gearing, giving three changes of speed, any of which may be quickened as the cutting tools approach centre of shaft, the number of speeds being thus increased to six.

Tool slides may be adjusted by rack and pinion to any length of shaft, and operated separately or together, each having three changes of power feed; also rapid hand movement quickly changed from hand to power feed.

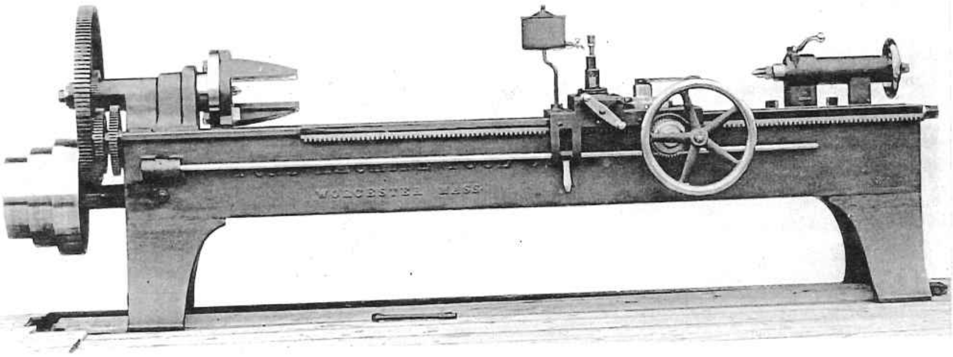
Centering Heads with revolving spindles driven by separate counter-shaft, drill both ends at once and slide aside while shafts are being put in machine and cut off.

Counter-shaft, water cans, swivel rollers to assist the handling of shafts, wrenches, etc., furnished.

Weight, with 12 feet bed, 8400 lbs. Price, $

Price, without Centering Heads, $

Beds can be made of any desired Length.



Lithotype Printing Co., Gardner, Mass. New York Office, 114 Nassau St.

AXLE LATHE,

MANUFACTURED BY

POND MACHINE TOOL COMPANY,

Successors to DAVID W POND, Manufacturers of

IRON WORKING MACHINERY,

DAVID W. POND, Pres't. **WORCESTER, MASS.** A. C. STEBBINS, Treas.

For turning Car and Locomotive Axles. Two pairs of tight and loose pulleys on countershaft give six speeds to spindle, and also enable the workman to rough out and finish work at different speeds without shifting belt on driving cone.

The driving spindle is fitted with a self-adjusting equalizing carrier, and receives end pressure on an anti-friction collar.

Feeds by steel screw placed as near line of cut as possible; are positive and self-acting, with proper changes from roughing to finishing made by the workman instantly without moving from tool carriage.

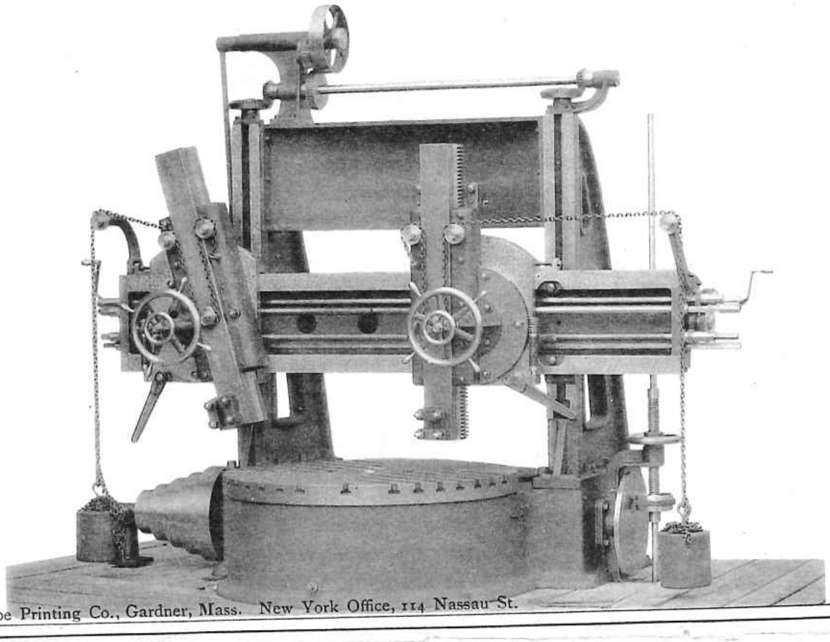
Tool carriage quickly brought to desired position by hand wheel, cut steel rack and gearing. Tool holder allows adjustment of tool to proper cutting point.

The slides for tool carriage are raised above the slides for sliding head, by which means they are protected from chips and water, the tool rest shortened and stiffened, and the tool carriage allowed to pass the sliding head for convenience in changing axles.

Sliding head can be set to turn tapering. Countershaft, water tank and wrenches furnished, and delivered with small parts boxed, at depots in Worcester.

Countershaft should make 150 and 100 revolutions per minute.

Weight, 5000 lbs. Price, $



Lithotype Printing Co., Gardner, Mass. New York Office, 114 Nassau St.

SIX-FEET BORING, TURNING AND SLOTTING MILL,

MANUFACTURED BY

POND MACHINE TOOL COMPANY,

Successors to DAVID W. POND, Manufacturers of

IRON WORKING MACHINERY,

DAVID W. POND, Pres't. **WORCESTER, MASS.** A. C. STEBBINS, Treas.

For boring and turning Pulleys and doing all work usually done on a facing lathe, with the advantage of ease in placing the work, inasmuch as the face plate being horizontal, and by a single turn of a screw convenient to workman lifted off the annular bearing at outer edge. Work laid upon it may be moved about until correctly centered, and then fastened. Where boring small holes or turning small diameters, the plate may be lifted off the outer annular bearing, as the spindle is very large in diameter and of great length, and provided with a step at its lower end upon which it revolves freely, notwithstanding its extreme weight. Table is driven by means of cut spur gearing. No bevel gears used, a very important feature producing particularly smooth work without jar or rattle, even at highest speeds.

Cross rail is raised and lowered by power. The Saddles are secured to upper and lower sides of cross rail by square gibbs and attached to the feed screws by nuts, that can be opened to allow a quick movement by hand, operated by a ratchet, through pinions engaging with rack on the cross rail.

Tool Slides are of rectangular section, hollow and have large bearing surfaces. This construction gives great stiffness without excessive weight. They can be set at any angle by means of worm and ratchet provided, and are operated by friction feed and so balanced that when feed is thrown out, they can be worked by quick hand movement easily. They are provided with four bolts and two straps, and the table revolves in the direction that permits use of same tools as would be suitable for planers or large lathes. Feed at any angle, up, down, or across, of one tool is independent of the other and automatic, is operated by a disc driving a friction wheel and can be instantly changed from 0 to ¾ of an inch by moving the friction wheel from centre of the disc to the outer edge.

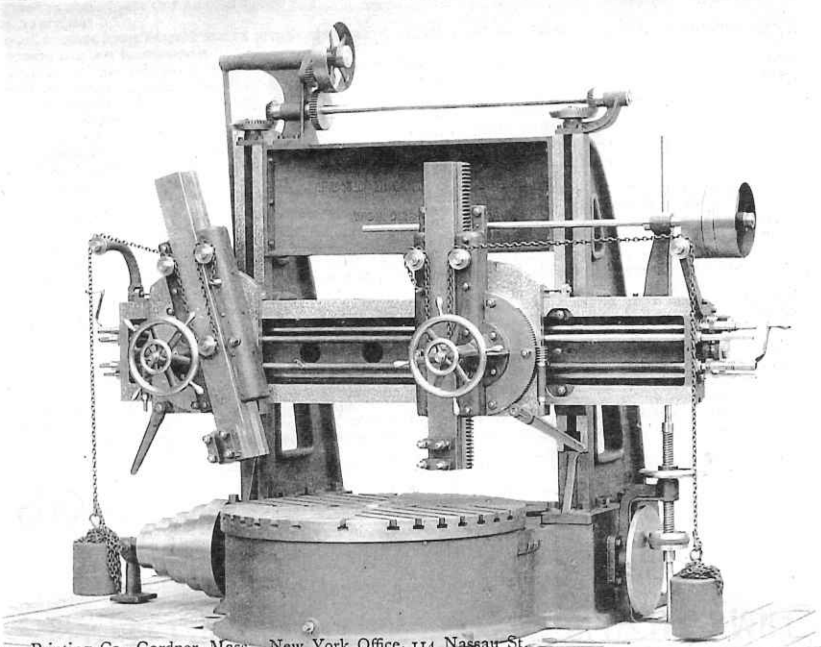
Slotting attachment is driven from an independent counter shaft, arranged with swing frame to ensure proper tension of belts in any position of cross rail. These belts, by means of powerful worm gearing, give a forward and back motion to one of the tool slides. When not in use, can be instantly disengaged to allow use of both heads for boring or turning.

For turning pulleys or arbors, an equalizing driver plate, a saddle or cross rail fitted with spindle, same as tail spindle of lathes and a centre fitted into face plate are furnished.

Swings 73½ inches; takes under cross rail, 48 inches; boring bars have 48 inches traverse. Driving cone has five steps for 4-inch belt, giving ten regularly progressing changes of speed. Counter shaft pulleys are 18 inches diameter, 6¼ inches face, and should run 200 revolutions.

Slotting counter shaft pulleys are 12 inches diameter, 5 inches face, and should run 355 revolutions. Slotting tool has a traverse of 20 inches.

7, 8, 10, 12 and 14 feet can be furnished.



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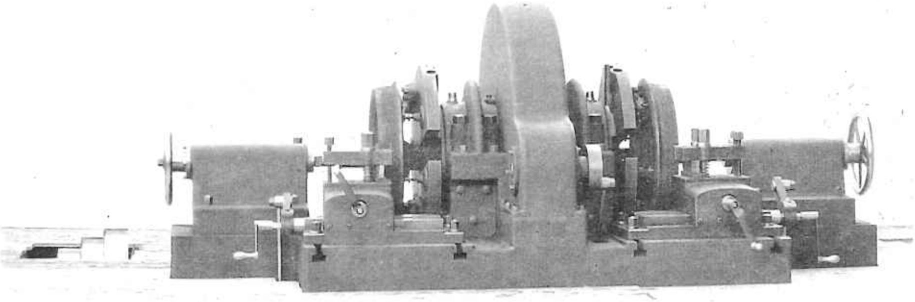


Lithotype Printing and Publishing Co , Gardner, Mass.

LATHE FOR TURNING

STEEL-TIRED AND CHILLED CAST-IRON CAR WHEELS.

Wheels of forty-two inches, or smaller diameter, can be turned without removing from the axle, and can be placed in the Lathe, the dogs and braces adjusted ready for turning, in fifteen minutes without use of crane, as the wheels are rolled to the centres which are twenty-three inches above the floor. In order that cuts may be taken very much larger than has been customary, and of which this Machine is easily capable, it is necessary to secure the wheels rigidly to the face-plates, which, for this reason are unusually heavy. This is accomplished by means of the dogging device and three large screws in each face-plate that hold the axle just behind the wheels, so it CANNOT spring. The dogs are of such construction that they need not be moved when changing wheels, will engage any pattern or diameter of wheels, and will not spring and cause chatter, which will be the result if pins, even of very large diameter, are used, projecting from the face-plates in a line parallel with the axle.

The enormous driving power of nearly 250 to 1, is obtained by use of ONLY two pairs of spiral SPUR gears, and a driving cone having four steps for a 5-inch belt, ranging from 28½ inches to 14 inches diameter, giving sufficient variation of speeds for all sizes of car wheels This gearing placed in the centre as shown, is entirely covered so that there is no possibility of injury to the workmen, or of chips getting into it, and gives abundant room to get at the wheels to turn them, and to chip the chills out when necessary; a valuable feature that the Latheman will appreciate, as this chipping should be done while the wheels are in motion, instead of stopping the Lathe.

The Face-Plates and Journals are one casting, and the gear is bolted to it, so that either is a simple piece to replace in case of accident, which is hardly to be looked for, as the teeth are 8 inches face by 1½ inches thick, and the pinion so placed that it engages FOUR of these teeth all of the time. This peculiar-construction positively prevents ANY chatter, a result we cannot obtain under such excessive strain by any other method.

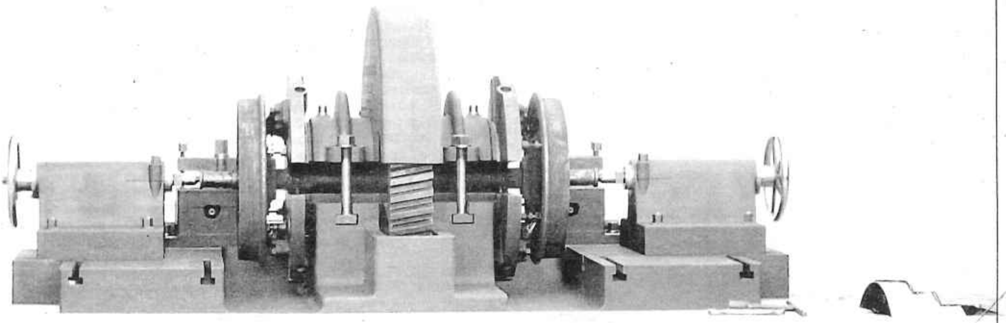
As shown, the gap in the gear into which the wheels are rolled, is filled when turning, the segment put in being the only piece that has to be moved to change wheels Its shape is such that it locks the whole together as if it were one piece. Without help the Latheman can easily take out and put this segment back in one-half minute.

The Tool Slides can be set to give any desired coning to the tread of the wheels, and are operated by hand or a positive power feed, which moves either slide independently, 1-64 to 1-4 inch per revolution.

Counter-shaft has 24-inch tight and loose pulley with 6¼ inches face, and should make 160 revolutions per minute.
Weight, 40,000 lbs. Price, $

POND MACHINE TOOL CO.,

WORCESTER, MASS.



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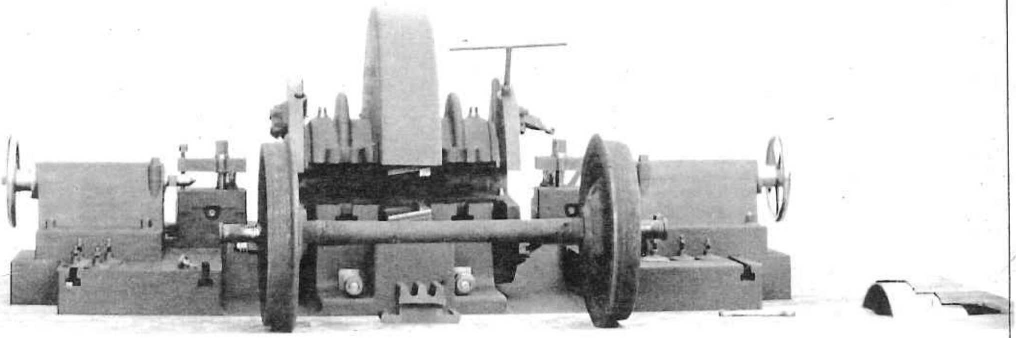

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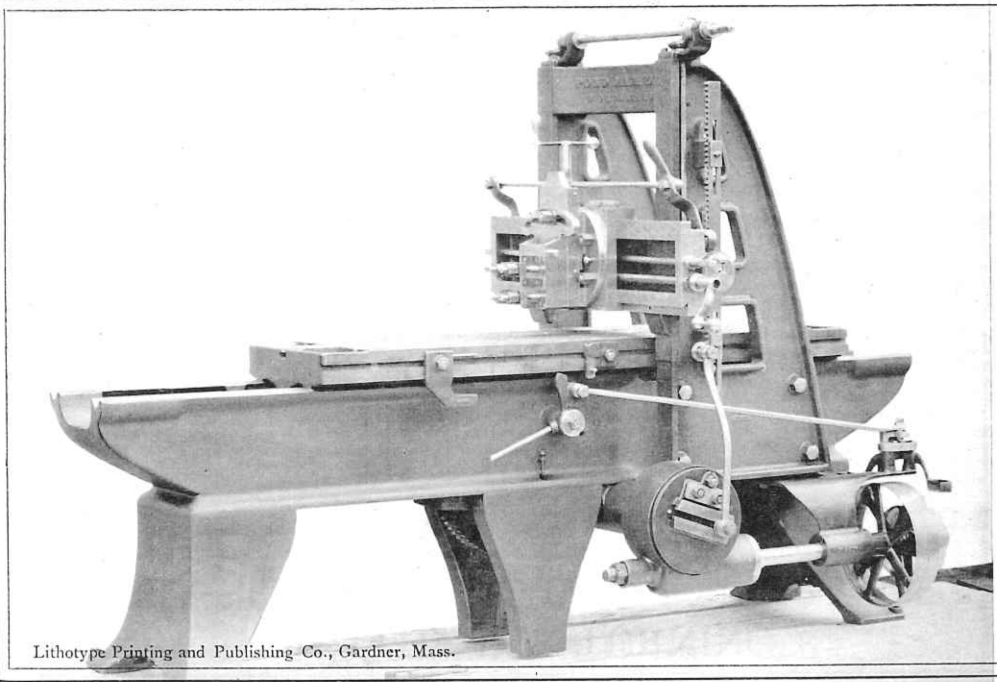


Lithotype Printing and Publishing Co., Gardner, Mass.

TWENTY-TWO INCH PLANER,

MANUFACTURED BY

POND MACHINE TOOL COMPANY,

MANUFACTURERS OF

IRON WORKING MACHINERY,

WORCESTER, MASS.

New Pattern including new features patented. Bed has great depth and its length in proportion to the length of table is greatly in excess of usual practice.

Uprights have sufficient metal and breadth of base to resist heavy cuts without jar when tool is at greatest height.

Table very thick, with three bolt slots truly planed, and pin holes drilled and reamed; receives back and forward motion from an open and a crossed belt through a powerful worm and gear, spur pinion and large gear engaging rack, all accurately cut. All journals are twice the usual length, and extra large diameters, and are carefully scraped together, straight surfaces are scraped to surface plates. The patented automatic belt shifter transfers but one belt at same time; it is entirely disconnected from feeding apparatus and is arranged to throw out to clear the reversing dogs on the table which can then be run backward to examine the work.

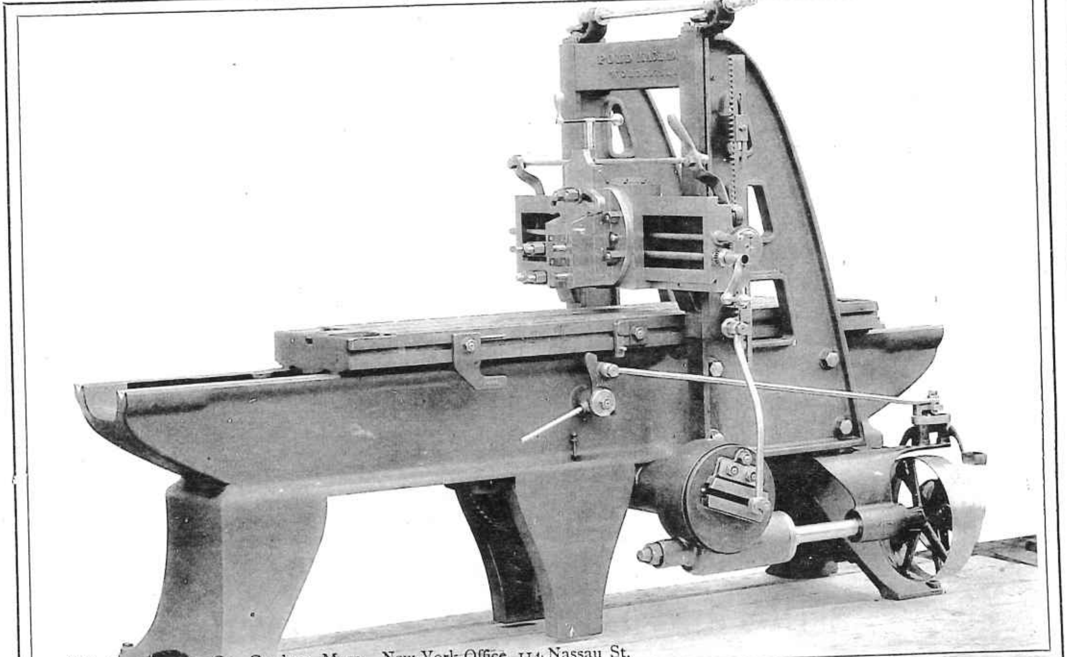
The patented *positive* feeding device gives automatic feed in all directions and is adjustable from 0 to ⅜ of an inch wide, and takes no power except at moment of feeding. The down and angular feeds can be operated by hand, if more convenient, from both ends of cross-head as well as top of saddle.

The cross-head is clamped to uprights by a single movement of one lever more securely than by four bolts and use of wrench, a great convenience for small work requiring frequent change.

Counter-shaft is furnished, and has two pulleys each 10 inches diameter, by 4¼-inch face for 4-inch belt, and should make 360 revolutions a minute.

PLANER WITH SMALL PARTS BOXED, DELIVERED AT DEPOT IN WORCESTER.

Plane in Width.	Plane in Height.	Plane in Length.	Weight.	Weight per Foot.	Price.	Price per Foot.
22 Inches.	22 Inches.	4 Feet.	4200 lbs.	300 lbs.	$	$



Lithotype Printing Co., Gardner, Mass. New York Office, 114 Nassau St.

TWENTY-FOUR INCH PLANER,

MANUFACTURED BY

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DAVID W. POND, Pres't. **WORCESTER, MASS.** A. C. STEBBINS, Treas.

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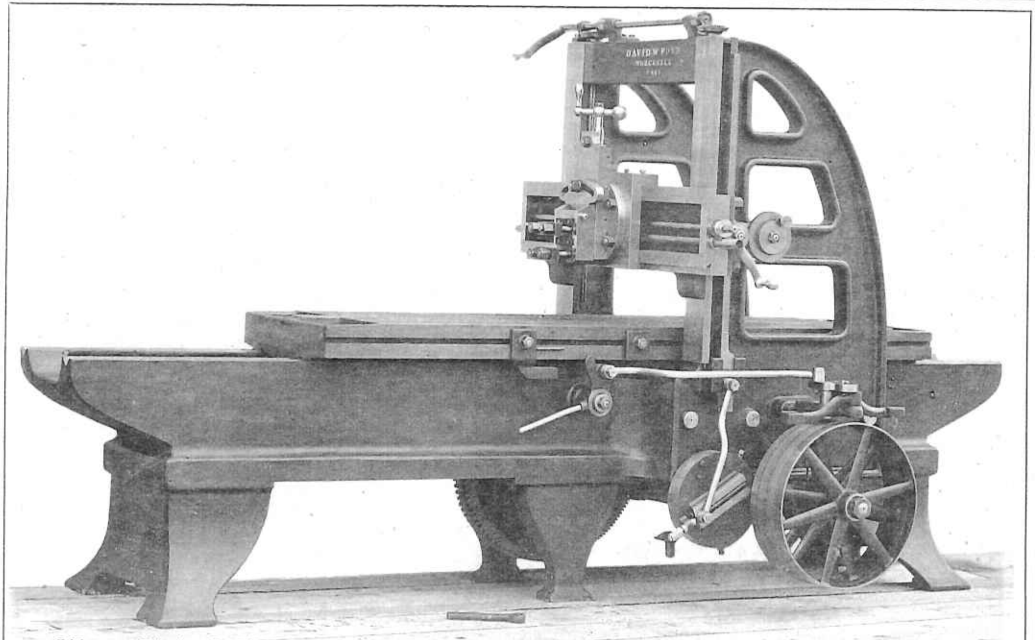
PLANER WITH SMALL PARTS BOXED, DELIVERED AT DEPOT IN WORCESTER.

Plane in Width.	Plane in Height.	Plane in Length.	Weight.	Weight per Foot.	Price.	Price per Foot.
24 Inches.	24 Inches.	4 Feet.	4500 lbs.	300 lbs.	$	$



Lithotype Printing Co., Gardner, Mass. New York Office, 114 Nassau St.

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Uprights have sufficient metal and breadth of base to resist heavy cuts without jar when tool is at greatest height.

Table very thick, with three bolt slots truly planed, and pin holes drilled and reamed; receives back and forward motion from an open and a crossed belt through a powerful train of cut gears and rack. These gears are mounted on shafts having very large diameters and more than twice the usual length of journal. These journals carefully scraped together and straight surfaces scraped to surface plates. The patented automatic belt shifter transfers but one belt at same time, thus obviating squealing of belts and jar of machine; it is entirely disconnected from feeding apparatus and is arranged to throw out to clear the reversing dogs on the table which can then be run backward to examine the work.

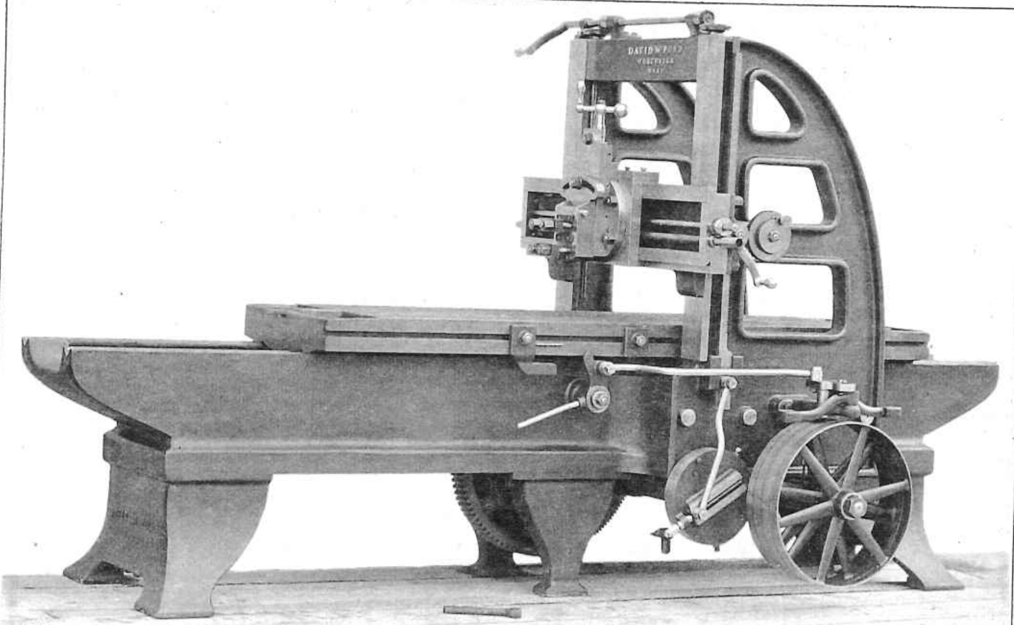
The patented feeding device gives automatic feed in all directions and is adjustable from 0 to ⅜ of an inch wide, and takes no power except at moment of feeding. The down and angular feeds can be operated by hand, if more convenient, from both ends of cross-head as well as top of saddle.

Countershaft is furnished, and has two pulleys each 12 inches diameter, by 3-inch. face for 3-inch belt, and should make 310 revolutions a minute.

PLANER WITH SMALL PARTS BOXED, DELIVERED AT DEPOT IN WORCESTER.

Plane in Width.	Plane in Height.	Plane in Length.	Weight.	Weight per Foot.	Price.	Price per Foot.
26 Inches.	26 Inches.	5 Feet.	5500 lbs.	500 lbs.	$	$

Extra Saddle on Cross-Head, $200 extra.



Lithotype Printing and Publishing Co., Gardner, Mass.

THIRTY-INCH PLANER,

MANUFACTURED BY

POND MACHINE TOOL COMPANY,

Successors to DAVID W. POND, Manufacturers of

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WORCESTER, MASS.

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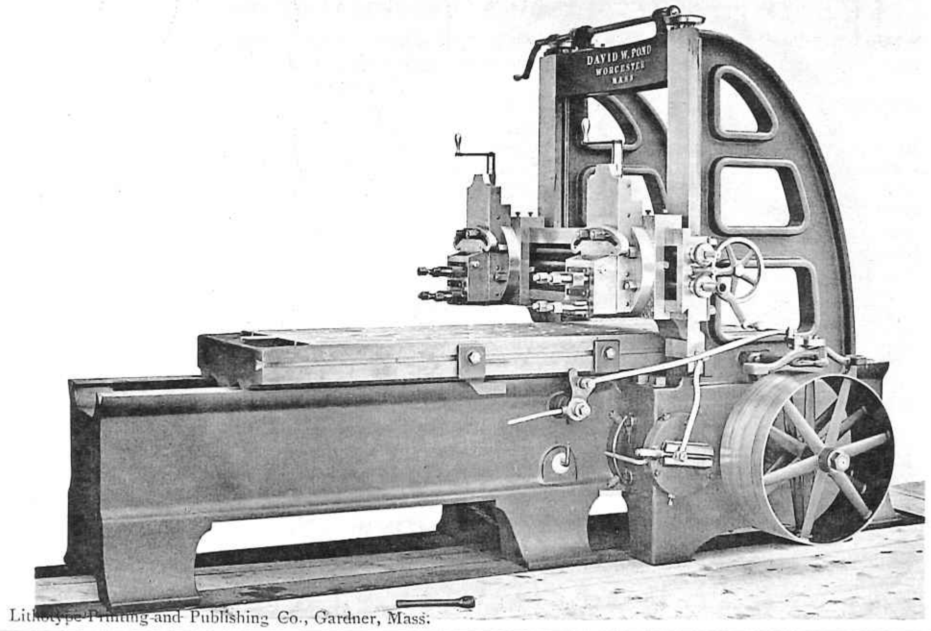
The patented feeding device gives automatic feed in all directions and is adjustable from 0 to ⅝ inch wide, and takes no power except at moment of feeding. The down and angular feeds can be operated by hand, if more convenient, from both ends of cross-head as well as top of saddle.

Counter-shaft is furnished, and has two pulleys each 12 inches diameter, by 3-inch face for 3-inch belt, and should make 310 revolutions a minute.

PLANER WITH SMALL PARTS BOXED, DELIVERED AT DEPOT IN WORCESTER.

Plane in Width.	Plane in Height.	Plane in Length.	Weight.	Weight per Foot.	Price.	Price per Foot.
30 Inches.	30 Inches.	5 Feet.	6000 lbs.	500 lbs.	$	$

Extra Saddle on Cross-Head, $200 additional.



Lithotype Printing and Publishing Co., Gardner, Mass.

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New Pattern including new features patented. Bed has great depth and its length in proportion to the length of table is greatly in excess of usual practice.

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Table very thick, with three bolt slots truly planed, and pin holes drilled and reamed; receives back and forward motion from an open and a crossed belt through a powerful train of cut gears and rack. These gears are mounted on shafts having very large diameters and more than twice the usual length of journal. These journals carefully scraped together and straight surfaces scraped to surface plates. The patented automatic belt shifter transfers but one belt at same time, thus obviating squealing of belts and jar of machine; it is entirely disconnected from feeding apparatus and is arranged to throw out to clear the reversing dogs on the table which can then be run backward to examine the work.

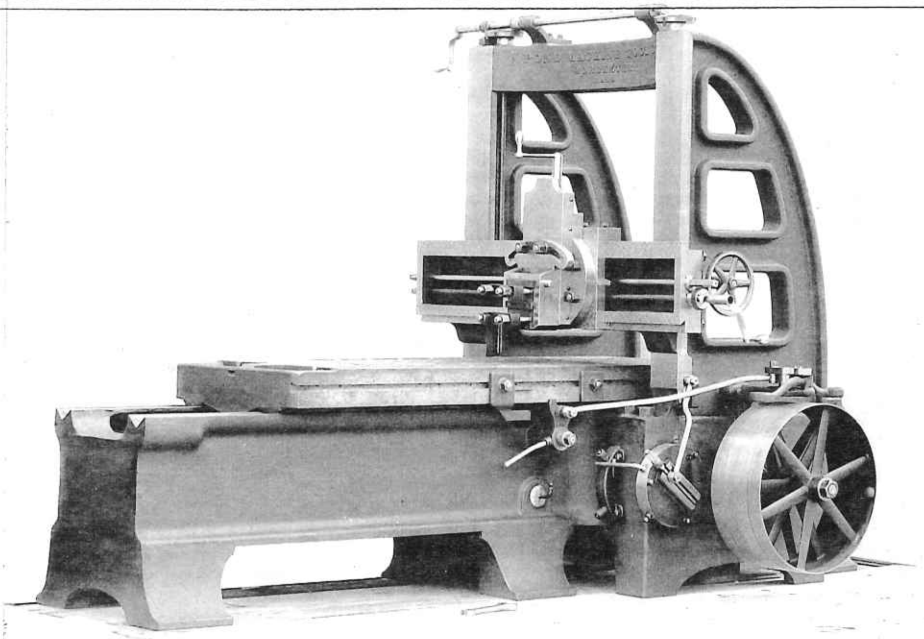
The patented feeding device gives automatic feed in all directions and is adjustable from 0 to ¾ inch wide, and takes no power except at moment of feeding. The down and angular feeds can be operated by hand, if more convenient, from both ends of cross-head as well as top of saddle.

Counter-shaft is furnished, and has two pulleys each 12 inches diameter, by 3⅝-inch face for 3½-inch belt, and should make 296 revolutions a minute.

PLANER WITH SMALL PARTS BOXED, DELIVERED AT DEPOT IN WORCESTER.

Plane in Width.	Plane in Height.	Plane in Length.	Weight.	Weight per Foot.	Price.	Price per Foot.
32 Inches.	32 Inches.	6 Feet.	9400 lbs.	700 lbs.	$	$

Extra Saddle on Cross-Head, $ extra.



Lithotype Printing Co., Gardner, Mass. New York Office, 114 Nassau St.

THIRTY-SIX INCH PLANER,

MANUFACTURED BY

POND MACHINE TOOL COMPANY,

Successors to DAVID W POND, Manufacturers of

IRON WORKING MACHINERY,

DAVID W. POND, Pres't. **WORCESTER, MASS.** A. C. STEBBINS, Treas.

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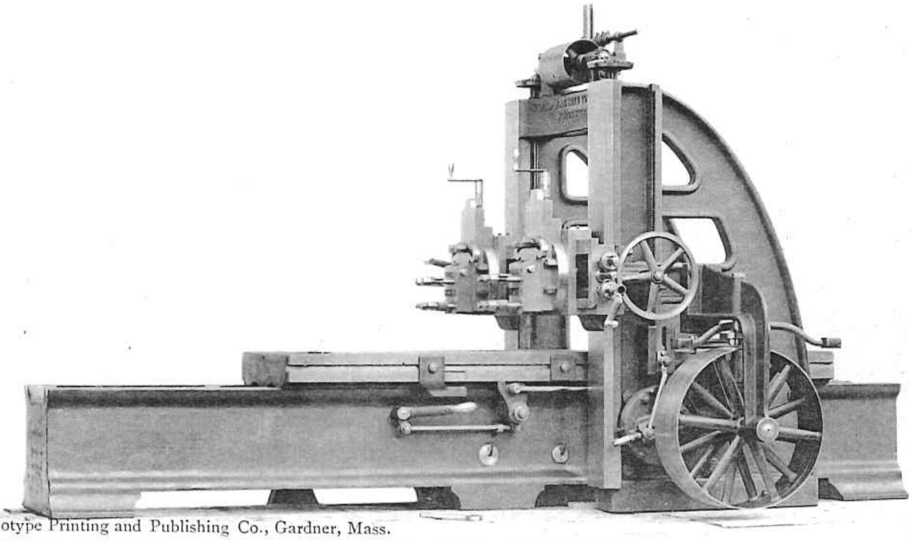
The patented feeding device gives automatic feed in all directions and is adjustable from 0 to ¾ of an inch wide, and takes no power except at moment of feeding. The down and angular feeds can be operated by hand, if more convenient, from both ends of cross-head as well as top of saddle.

Counter-shaft is furnished, and has two pulleys each 12 inches diameter, by 3⅝-inch face for 3½-inch belt, and should make 296 revolutions a minute.

PLANER WITH SMALL PARTS BOXED, DELIVERED AT DEPOT IN WORCESTER.

Plane in Width.	Plane in Height.	Plane in Length.	Weight.	Weight per Foot.	Price.	Price per Foot.
36 Inches.	36 Inches.	6 Feet.	10000 lbs.	725 lbs.	$	$

Extra Saddle on Cross-Head, $200 extra.



Lithotype Printing and Publishing Co., Gardner, Mass.

THIRTY-EIGHT INCH PLANER,

MANUFACTURED BY

POND MACHINE TOOL COMPANY,

MANUFACTURERS OF

IRON WORKING MACHINERY,

WORCESTER, MASS.

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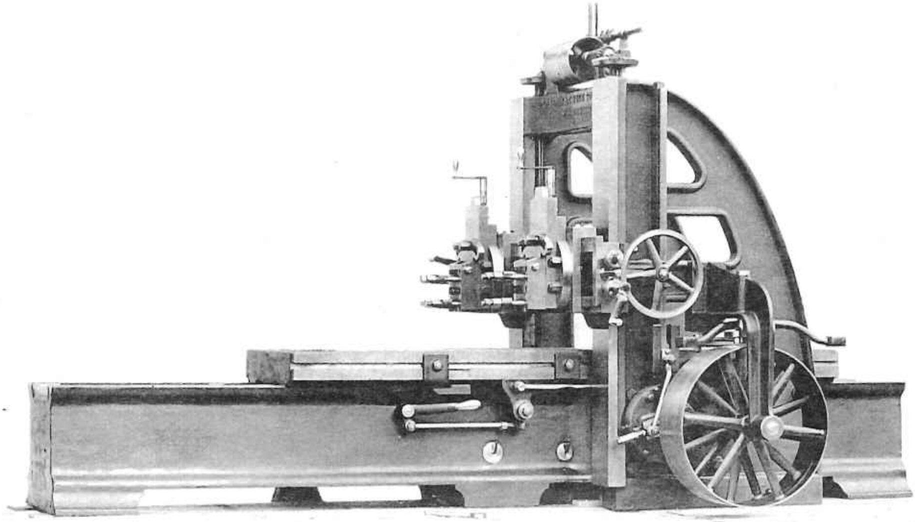
The patented feeding device gives automatic feed in all directions and is adjustable from 0 to 1 inch wide, and takes no power except at moment of feeding. The down and angular feeds can be operated by hand, if more convenient, from both ends of cross-head as well as top of saddle.

Counter-shaft is furnished, and has two pulleys each 18 inches diameter, by 6-inch face for 6-inch belt, and should make 254 revolutions a minute.

PLANER WITH SMALL PARTS BOXED, DELIVERED AT DEPOT IN WORCESTER.

Plane in Width.	Plane in Height.	Plane in Length.	Weight.	Weight per Foot.	Price.	Price per Foot.
38 Inches.	38 Inches.	8 Feet.	19800 lbs.	920 lbs.	$	$

Extra Saddle on Cross-Head, $ extra. Saddle on Uprights, $, each.



Lithotype Printing and Publishing Co., Gardner, Mass.

FORTY-INCH PLANER,

MANUFACTURED BY

POND MACHINE TOOL COMPANY,

Successors to DAVID W. POND, Manufacturers of

IRON WORKING MACHINERY,

WORCESTER, MASS.

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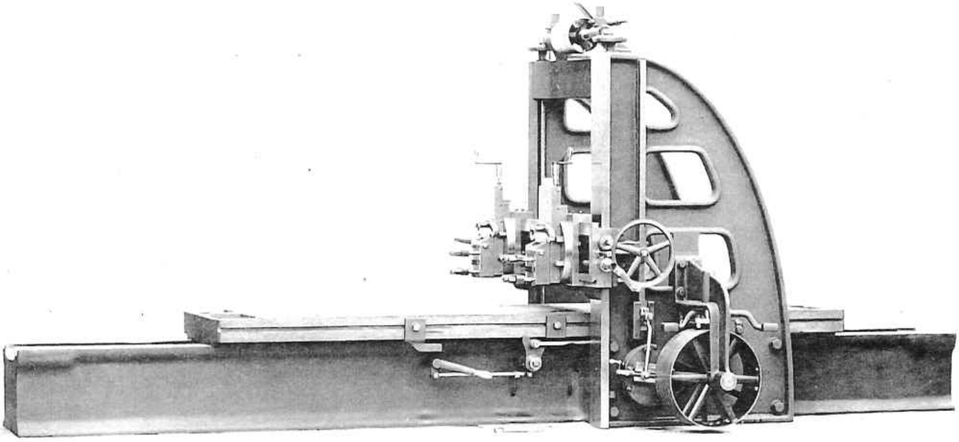
PLANER WITH SMALL PARTS BOXED, DELIVERED AT DEPOT IN WORCESTER.

Plane in Width.	Plane in Height.	Plane in Length.	Weight.	Weight per Foot.	Price.	Price per Foot.
40 Inches.	40 Inches.	8 Feet.	19800 lbs.	920 lbs.	$	$

Extra Saddle on Cross-Head, $ extra. Saddle on Uprights, $ each.



Lithotype Printing Co., Gardner, Mass. New York Office, 114 Nassau St.

FORTY-TWO INCH PLANER.

MANUFACTURED BY

POND MACHINE TOOL COMPANY,

Successors to DAVID W. POND, Manufacturers of

IRON WORKING MACHINERY,

DAVID W. POND, Pres't. **WORCESTER, MASS.** A. C. STEBBINS, Treas.

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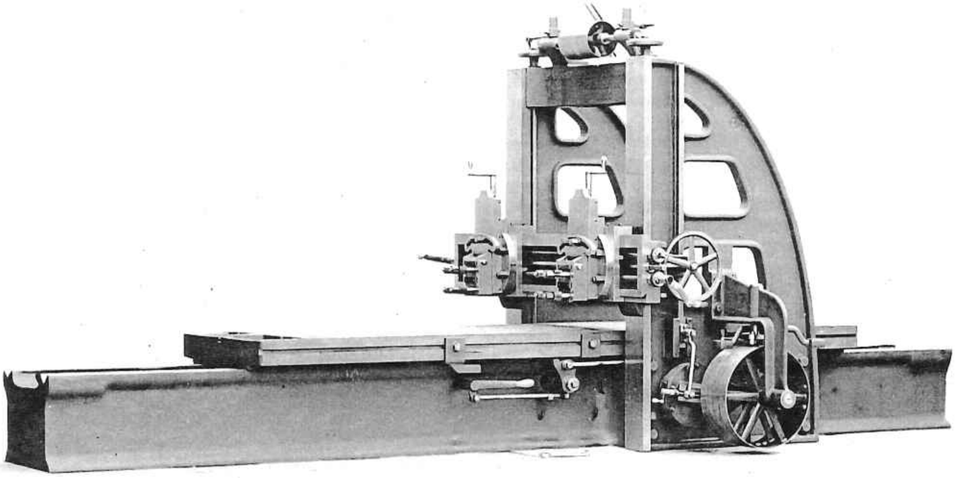
The patented feeding device gives automatic feed in all directions and is adjustable from 0 to 1 inch wide, and takes no power except at moment of feeding. The down and angular feeds can be operated by hand, if more convenient, from both ends of cross-head as well as top of saddle.

Counter-shaft is furnished, and has two pulleys each 18 inches diameter, by 6¼-inch face for 6 inch belt, and should make 290 revolutions a minute.

PLANER WITH SMALL PARTS BOXED, DELIVERED AT DEPOT IN WORCESTER.

Plane in Width.	Plane in Height.	Plane in Length.	Weight.	Weight per Foot.	Price.	Price per Foot.
42 Inches.	42 Inches.	10 Feet.	23000 lbs.	1100 lbs.	$	$

Extra Saddle on Cross-Head, $250, extra. Saddle on Uprights, $300, each.



Lithotype Printing Co., Gardner, Mass. New York Office, 114 Nassau St.

FORTY-EIGHT INCH PLANER,

MANUFACTURED BY

POND MACHINE TOOL COMPANY,

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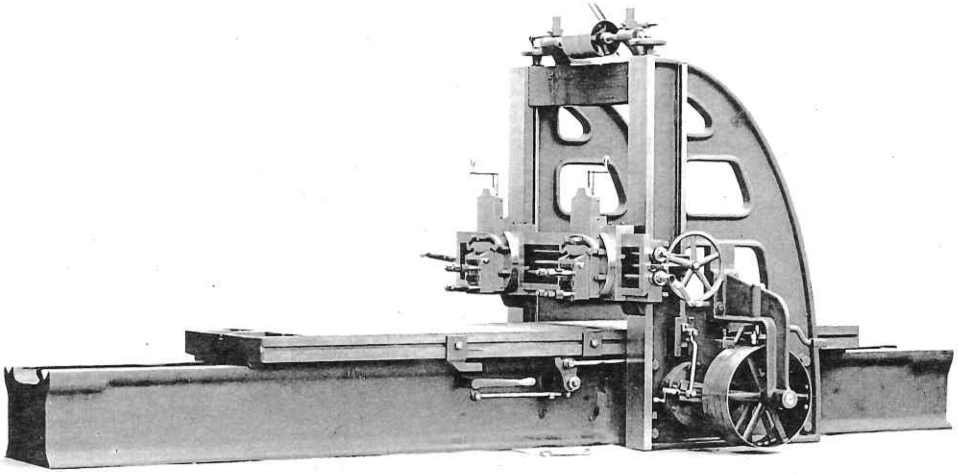
The patented feeding device gives automatic feed in all directions and is adjustable from 0 to 1 inch wide, and takes no power except at moment of feeding. The down and angular feeds can be operated by hand, if more convenient, from both ends of cross-head as well as top of saddle.

Counter-shaft is furnished, and has two pulleys each 18 inches diameter, by 6¼-inch face for 6 inch belt, and should make 285 revolutions a minute.

PLANER WITH SMALL PARTS BOXED, DELIVERED AT DEPOT IN WORCESTER.

Plane in Width.	Plane in Height.	Plane in Length.	Weight.	Weight per Foot.	Price.	Price per Foot.
48 Inches.	48 Inches.	10 Feet.	25525 lbs.	1300 lbs.	$	$

Extra Saddle on Cross-Head, $275, extra. Saddle on Uprights, $325, each.



Lithotype Printing Co., Gardner, Mass. New York Office, 114 Nassau St.

FIFTY-FOUR INCH PLANER,

MANUFACTURED BY

POND MACHINE TOOL COMPANY,

Successors to DAVID W. POND, Manufacturers of

IRON WORKING MACHINERY,

DAVID W. POND, Pres't. **WORCESTER, MASS.** A. C. STEBBINS, Treas.

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Counter-shaft is furnished, and has two pulleys each 18 inches diameter, by 6¼-inch face for 6 inch belt, and should make 280 revolutions a minute.

PLANER WITH SMALL PARTS BOXED, DELIVERED AT DEPOT IN WORCESTER.

Plane in Width.	Plane in Height.	Plane in Length.	Weight.	Weight per Foot.	Price.	Price per Foot.
54 Inches.	54 Inches.	12 Feet.	30000 lbs.	1375 lbs.	$	$

Extra Saddle on Cross-Head, $300, extra. Saddle on Uprights, $350, each.

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